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according to Claim 63, the device being manufactured via a development step after exposing the wafer face with the pattern.--.

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-67 are now presented for examination. Claims 2 and 27 have been cancelled without prejudice to or disclaimer of their subject matter. Claims 1, 3, 4, 7-9, 11, 13, 15, 17, 19, 21, 23, 28, 29, 30 and 37-42 have been amended to define still more clearly what Applicants regard as their invention, in terms which distinguish over the art of record. Claims 43-67 have been added to assure Applicants of the full measure of protection to which they deem themselves entitled. Claims 1, 4, 8, 11, 13, 15, 17, 19, 21, 23, 48, 53, 58 and 63 are the only independent claims.

Claims 9, 10, 29, 30 and 37-42 have been objected to under 37 C.F.R. § 1.75(c) as being in improper form since they are multiple dependent claims that depend from other multiple dependent claims. Claims 9, 29 and 30 have been amended to remove multiple dependency therefrom and Claims 37-42 have been amended so that each of Claims 37-42 as amended depends only from Claims 1, 4, 8, 11, 13, 15, 17, 19, 21 and 23 which are not

multiply dependent. Accordingly, it is believed that the objections to Claims 9, 10, 29, 30 and 37-42 have been removed.

Claims 1 and 11-22 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,373,519 (Siono, et al.). Claims 3-7, 23-28 and 31-36 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Siono, et al. With regard to the claims as amended, these rejections are respectfully traversed.

Independent Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23 as amended are directed to optical elements that include a reflection preventive light-shielding member. In Claim 1 as amended, the reflection preventing light-shielding member has a metal at the periphery of an effective area of the optical element. In Claim 4 as amended, the light shielding member has a ceramic material at the periphery of the effective area of an optical element. In Claims 15 and 21 as amended, a reflection preventive light-shield area blocks radiant energy with no generation of undesirable substances. In Claims 11, 13, 17 and 19 as amended, a reflection preventive light-shielding area blocks UV light. In Claim 23 as amended, the reflection preventive light-shielding member includes an inorganic material at the periphery of the optical element.

In Applicants' view, Siono, et al. discloses a semiconductor laser with an optical device. The optical device

has a reflection diffractive optical lens which diffracts part of the laser light emitted from the emitting end face of the laser chip to form diffracted light beams and allows a diffracted light beam having a selected wavelength among the diffracted light beams to be incident on the emitting end face. The wavelength of the laser light emitted from the semiconductor laser chip is thereby stabilized. In the optical device, a second optical element has a reflection diffractive grating structure which reflects and diffracts part of the laser light emitted from the semiconductor laser chip to form plural orders of diffracted light beams and allows diffracted light beams of a selected order to be incident on the emitting end face of the semiconductor laser chip.

The feature of Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23 of a reflection preventive light shielding member or area is disclosed at least at lines 2 and 3 of page 8 wherein it is disclosed that the optical element comprises a metal subjected to reflection preventive treatment, at lines 15 and 16 of page 28 wherein it is disclosed that the light-shielding member has low reflectivity, in Claim 27 as originally filed wherein the light shielding material is a metal subjected to reflection preventive treatment and in Claim 29 as originally filed wherein the reflection preventive treatment includes a laminated structure of

a metal oxide layer on the light-shielding member. It is not believed that new matter has been added.

According to the invention defined in Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23, the periphery of the effective area of an optical element has a reflection preventive light-shielding member or a reflection preventing light-shielding area to prevent stray or unneeded light at the periphery from penetrating the optical element and from reflecting from it.

Siono, et al. may disclose a diffractive reflection layer at the periphery of an effective area of an optical element. As clearly shown in Fig. 5A and disclosed from line 55 of column 9 to line 2 of column 10 of Siono, et al., the light in the peripheral portion 24B is reflected back to the light emitting end face of the semiconductor laser chip 21 to enter the laser chip and the optimal input optical power to the semiconductor laser chip depends on the reflectance of the light emitting end face 29. In contrast to Siono, et al.'s requirement of reflecting light from a peripheral portion, it is a feature of Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23 that an optical element has a reflection preventive light-shielding member or a reflection preventive light-shielding area at the periphery of an effective area of an optical element. Accordingly, Siono, et al. is directed away from and fails in any manner to teach or suggest the features of Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23. It

is therefore believed that Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23 are completely distinguished from Siono, et al. and are allowable.

Claim 8 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Siono, et al. in view of Official Notice. With regard to Claim 8 as amended, this rejection is respectfully traversed.

Independent Claim 8 as amended, is directed to an optical element that is provided with a reflection preventive light-shielding member composed of a reflection preventive light shielding ink and an alignment mark at the periphery of the optical element.

It is a feature of Claim 8 as amended, that a reflection preventive light-shielding member has a light shielding ink and an alignment mark at the periphery of the optical element. As discussed, with respect to Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23, Siono, et al. requires that light must be diffracted at and then reflected from a periphery portion (e.g., light 24B reflected from portion 23 in Fig. 5A) to be returned to the light emitting end face of a semiconductor laser. Accordingly, Siono, et al. does not in any manner suggest the feature of a reflection preventive light-shielding member at the periphery of an optical element of Claim 8. While use of alignment marks may be well known, it is not seen that the

addition of known alignment marks to Siono, et al.'s optical element with a light reflecting periphery structure could possibly suggest the reflection preventive light-shielding features of Claim 8. It is therefore believed that Claim 8 as amended, is completely distinguished from any combination of Siono, et al. and known alignment marks and is allowable.

Newly added independent Claim 48 is directed to a diffractive optical element having a light shielding area at the periphery of the effective area of the diffractive optical element.

Newly added independent Claim 53 is directed to a diffractive optical element having a light-shielding member at the periphery of an effective area of the diffractive optical element.

According to the invention of newly added Claims 48 and 53, the periphery of an effective area of a diffractive optical element has a light shielding member or area. Siono, et al. is directed to a structure at the periphery of an optical element that diffracts light and reflects the diffracted light back to a predetermined emitting face of a semiconductor laser chip in order to optimize the operation of the semiconductor laser chip. Accordingly, Siono, et al. is directed away from and fails to suggest the light shielding feature of Claims 48 and 53.

It is therefore believed with respect to Siono, et al. that newly added Claims 48 and 53 are allowable.

Newly added independent Claim 58 is directed to an optical element having a reflection preventive light-shielding member at a periphery of the effective area of the optical element.

Newly added independent Claim 63 is directed to a diffractive optical element having a reflection preventive light-shielding member at the periphery of the effective area of the diffractive optical element.

As discussed with respect to Claims 1, 4, 11, 13, 15, 17, 19, 21 and 23, Siono, et al. only teaches a structure at the periphery of an optical element that diffracts light incident at the periphery of an optical element from a laser semiconductor laser chip and returns the selected diffracted light from the periphery structure to the emitting face of the semiconductor laser chip. In contrast to Siono, et al.'s reflection of selected diffracted light from the periphery of an optical element, it is a feature of Claims 58 and 63 that a light-shielding member at the periphery of an effective area of a diffractive optical element is reflection preventive so as to suppress any reflections from the periphery. Accordingly, it is not seen that Siono, et al.'s reflecting peripheral portion could possibly suggest the features of Claims 58 and 63. It is

therefore believed with respect to Siono, et al. that newly added Claims 58 and 63 are allowable.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

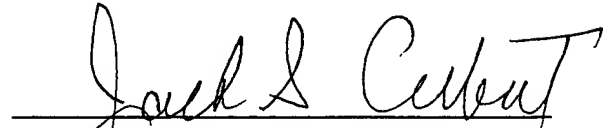
The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable consideration and reconsideration and early passage to issue of the present application.

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Respectfully submitted,


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